

Remarks

Claims 1 and 5 through 12 are now pending.

Claims 1 and 12 have been amended in response to the Examiner's objections. In particular, claim 1 has been amended to require that the Applicants' tread, including said tread lugs, *consist of* a closed cellular structured rubber composition .

The Rejection

The following patents have been relied upon to reject various of the Applicants' claims:

U.S. Patents

4,249,588	Egan
4,487,892	Ohmori et al. (Ohmori)

U.S. Patents Applications

2003/0089438	Sandstrom et al. (Sandstrom)
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Foreign Patents

JP 8-324209	Japan 209
WO 02/40581)	Cole
SU 1625713	Russia

Rejections Under 35 U.S.C. Section 112, Second Paragraph

It is believed that the Examiner's objections to the Applicants' claims have been remedied by amendments made to claims 1 and 12.

Rejections Under 35 U.S.C. Section 103

- A. Claims 1, 8 and 12 have been rejected under 35 U.S.C. Section 103(a) as being obvious in view of Japan 209.
- B. Claims 5 and 6 have been rejected under 35 U.S.C. Section 103(a) as being obvious in view of a combination of Japan 209 and Cole or Egan.
- C. Claims 7, 9 and 10 have been rejected under 35 U.S.C. Section 103(a) as being obvious in view of a combination of Japan 209 and Ohmori and Russia.
- D. Claims 1 and 5 through 12 have been rejected under 35 U.S.C. Section 103(a) as being obvious in view of a combination of Sandstrom and Cole and Japan 209 and optionally Egan.

A reconsideration of the rejections of the Applicants' claims under 35 U.S.C. Section 103(a) is requested in view of amendments made to the claims and comments herein.

The Invention

It is important to appreciate that the Applicants' claimed tire is composed of a tread with ground contacting lugs, wherein

- A. the tread lugs are significantly spaced apart;
- B. the lugs are designed to be shock absorbingly ground contacting;
- C. the tread and lugs consist of a closed cellular rubber composition.

Discussion

Rejections Under 35 U.S.C. Section 103

A. Rejection of Claims 1, 8 and 12 under 35 U.S.C. Section 103(a) as being obvious in view of Japan 209

The tire tread of the Applicants' amended claim 1, and therefore dependant claims 8 and 12, is readily distinguished from and is intended to exclude the agricultural tire tread of Japan 209. The Applicants' amended claim 1 requires the tread and the tread lugs to consist of a closed cellular rubber composition. A significant purpose is to provide a cushioning effect for the tire through the closed cellular rubber composition of the spaced apart tread lugs as well as the tread itself.

In contrast, the tire of Japan 209 is limited to a layer on the outside of the tread lugs to act as a mud anti-sticking layer with no teaching or suggestion to provide an entire tread and lugs with a closed cellular rubber composition to provide the Applicants' required shock absorbing effect for the tire itself. According, it is intended that the invention of the Applicants' amended claim 1 excludes the closed cell layered tire of Japan 209.

It is therefore contended that tire of the Applicants' amended claim 1, as well as dependent claims 8 and 12, are not obvious in view Japan 209 in the sense of 35 U.S.C. Section 103(a).

One having skill in the pertinent art would not be led by Japan 209 to extend its outer

closed foam layer to include the tread and lugs of the tire in the absence of the Applicants' own specification and claims.

It is important to appreciate that the issue should not be whether one *could possibly* expand the closed cellular rubber layer of Japan 209 to include the tread and lugs, but, instead, whether there is any teaching or suggestion or even a vision or motivation within Japan 209 for one to make such an expansion. It appears that, clearly, it is only the Applicants' disclosure and claims which teach the invention of the Applicants' amended claim 1.

Accordingly, it is contended that a prima facie case of obviousness of the invention of the Applicants' amended claim 1 and dependent claims 8 and 12 in view of Japan 209 is not made out in the sense of 35 U.S.C. 103(a).

B. Rejection of Claims 5 and 6 under 35 U.S.C. Section 103(a) in view of a combination of Japan 209 and Cole or Egan

The combination of Japan 209 and Cole or Egan is an improper combination of references. As presented above, the invention of the Applicants' amended claim 1 is intended to exclude the tire of Japan 209 and Japan 209 patent publication itself is materially deficient and does not make out a prima facie case of obviousness of the Applicants' claim 1.

Accordingly, the combination of Japan 209 taken with Cole and/or Egan (which discuss the use of a blowing agent to make a closed cellular rubber composition) is an improper combination of references does not make out a prima facie case of obviousness of the invention of the Applicants' claims 5 and 6, with contain a blowing agent restriction for the tire of the Applicants amended claim 1, in the sense of 35 U.S.C. Section 103(a).

C. Rejection of Claims 7, 9 and 10 under 35 U.S.C. Section 103(a) in view of a combination of Japan 209 and Ohmori and Russia

The combination of Japan 209 and any of Ohmori and Russia is an improper combination of references. As presented above, ~~it is contended that~~ *it is contended that* the invention of the Applicants' amended claim 1 is intended to exclude the tire of Japan 209 and that the Japan 209

patent publication itself does not make out a prima facie case of obviousness of the Applicants' claimed tire.

Accordingly, the Japan 209 is inappropriately combined with Ohmori (which discusses a rubber composition for tires comprised of a non-crystallizable resinous copolymers of alpha methyl styrene or styrene containing a diene and a rubber selected from specified rubbers with no teaching or suggestion of a tire tread of a closed cellular rubber) and/or Russia (which discusses a tire having a tread with a protective coating on its outer surface having good gas impermeability without any teaching or suggestion of a tire composed of a closed cellular rubber).

Moreover, the Applicants' claim 7, dependent from amended claim 1, relates to an inclusion of a thin layer of a rubber blend positioned between its tread of said closed cellular rubber composition and the tire carcass.

which further distinguishes the Applicants' claimed invention

D. Rejection of Claims 1 and 5 through 12 under 35 U.S.C. Section 103(a) in view of a combination of Sandstrom and Cole and Japan 209 and optionally Egan

Sandstrom relates to a tire having a butyl rubber-based tread with substantial lugs to take advantage of shock absorbency of the butyl rubber. However, Sandstrom does not teach or disclose any tire tread composed of a closed cellular rubber. Accordingly, Sandstrom, by itself, does not make out a prima facie case of obviousness of the Applicants' amended claims and, moreover, is therefore materially deficient for a purpose of rejecting the Applicants' claims as being obvious in the sense of 35 U.S.C. Section 103(a).

Cole relates to a tire, such as a bicycle tire, which contains an "outer tire layer" of microcellular closed-cell sponge rubber created various blowing agents. However, Cole is not related to a tire of the Applicants' required type, namely a tire tread having significantly spaced apart and significantly raised lugs which themselves required to be composed of a closed cellular structured rubber of defined cellular density and cell size.

It is contended that it would not be obvious to one having ordinary skill in the tire art to

use the “outer tire layer” of Cole of a microcellular closed cell sponge rubber created with the Cole-indicated blowing agent(s) for the significantly lugged rubber tread of Sandstrom to arrive at the Applicants’ claimed invention in the absence of the Applicants’ own specification and claims without undue experimentation. It is contended that, at most, the disclosure of Cole amounts to no more than an invitation to try the microcellular closed sponge rubber of Cole in the lugged tread of Sandstrom.

Accordingly, it is contended that Cole is materially deficient and does not correct the aforesaid deficiency of Sandstrom for rejecting the Applicants’ claims 1 through 12 as being obvious in the sense of 35 U.S. C. Section 103(a). It is contended that the combination of Sandstrom and Cole does not make out a prima facie case of obviousness of the Applicants’ claimed invention in the sense of 35 U.S.C. Section 103(a).

As pointed out above, the Applicants’ amended claims are intended to exclude the tire of Japan 209.

Further, as discussed earlier, Japan 209, which is restricted to a foam layered tread, is materially deficient for a purpose of rejecting the Applicants’ claimed invention as being obvious in the sense of 35 U.S.C. Section 103(a).

More importantly, Sandstrom and Cole, with their aforesaid individual and collective deficiencies, do not correct the aforesaid significant deficiency of what is considered herein to be an inappropriately applied Japan 209 reference insofar as the Applicants’ amended claim 1 is concerned.

Accordingly, it is contended that a combination of Japan 209 with any of Sandstrom and Cole is inappropriate in the sense of 35 U.S.C. Section 103(a). Moreover, it is contended that the combination of Sandstrom with any of Japan 209 and Cole does not make out a prima facie case of obviousness of the invention of the Applicants’ amended claims in the sense of 35 U.S.C. Section 103(a).

Egan relates to a tire having a rubber tread of a cellular structure for its ground-

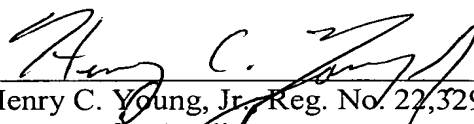
contacting portion. Egan is not directed to the tread of the Applicants' claimed invention requiring significantly raised and spaced apart lugs in combination with the Applicants' defined cellular density and cell size to cooperatively provide a shock absorbing effect for a tire. Egan is thereby individually materially deficient, by itself, to reject the Applicants' claimed invention as being obvious in the sense of 35 U.S.C. Section 103(a).

Moreover, Egan does not remedy the aforesaid deficiencies of any of Sandstrom, Cole and Japan 209, or their combination. It is therefore contended that a prima facie case of obviousness of the invention of the Applicants' claims is not made out by a combination of Egan with any of Sandstrom, Cole and Japan 209 in the sense of 35 U.S.C. Section 103(a).

Conclusion

In view of the amendments made to the claims, particularly the Applicants amended claim 1, taken with comments herein, it is contended that the invention of the Applicants' amended claims is patentably distinct from Japan 209 and patentably distinct from an inappropriate combination of Japan 209 taken with any of Sandstrom Cole, Egan, Ohmori and Russia in the sense of 35 U.S.C. Section 103(a).

Respectfully submitted,


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